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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/365,510	08/02/1999	KENJI SUZUKI	35.C13719	1896

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24  
EXAMINER

MAYES, MELVIN C

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 07/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/365,510

Applicant(s)

SUZUKI ET AL.

Examiner

Melvin Curtis Mayes

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 and 10-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 7 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

(1)

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

(2)

Claims 1, 4 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 59-091079 in view of Sneed.

JP 59-091079 discloses a method and apparatus for recording comprising: recording an image on a recording paper by ink jet recording heads 12; feeding the imaged paper and a laminate material to a roller pair 27 where their leading ends are aligned and laminated; and feeding the laminate to a pressure roller pair 28 where the laminate material is applied onto the surface of the imaged paper through melting under heating. The laminate material is a porous resin film which becomes transparent when welded to the imaged paper and the pressure roller pair comprises rollers 28 having heaters 29 (Abstract and oral translation). JP '079 does not disclose that the recording paper has an image receiving layer such as one containing particles of diameter of 0.1 to 10 microns.

Sneed teaches that the in producing recording media used in ink jet printers, polymer binder is used in combination with fillers to form the coating composition on the support to provide the desired matte surface and opaque appearance. Sneed teaches that the fillers which provide a substantial means of ink absorption due to their porous nature should have a particle

Art Unit: 1734

size of at least 0.1 microns and a maximum of 25 microns to produce the desired matte surface (col. 2, lines 32-36, col. 7, lines 24-57).

It would have been obvious to one of ordinary skill in the art to have modified the method of JP '079 for recording by providing the recording paper for ink jet printing with an image receiving coating, as taught by Sneed, to provide ink jet recording media with the desired matte surface and opaque appearance. Providing the coating (image receiving layer) with particles of diameter in the range of 0.1 to 25 microns (encompassing the range of 0.1 to 10 microns claimed in Claim 1) would have been obvious to one of ordinary skill in the art, as taught by Sneed, to provide the coating with a filler which provides a substantial means of ink absorption due to their porous nature and which produces the desired matte surface.

By melting the laminate material resin film by the pressure roller having a heater, the surface of the resin film is obviously plasticized (made plastic) and smoothed with the heated pressure roller (heating and pressurizing means) to bond the film onto the image receiving layer (coating) of the recording paper, as claimed.

(3)

Claims 1-4, 6 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 1 above, and further in view of JP 10-44605.

JP 10-44605 teaches that the protective layer of a recorded paper can be enhanced in glossiness by feeding the recording paper between a heated mirror-plane cylinder 40 of mirror plane of 200% or more and platen roller 34 to heat and press the protective layer to soften the protective layer (computer translation, paragraphs 0019-0024).

Art Unit: 1734

It would have been obvious to one of ordinary skill in the art to have modified the method and apparatus of the references as combined by providing the heated pressure roller of mirror plane of 200% or more, as taught by JP '605, to enhance glossiness of the laminate material resin film. By feeding the laminate of resin film and imaged paper between heated mirror-plane rollers of mirror plane of 200% or more after laminating, as taught by JP '605, the surface of the resin film is obviously plasticized and smoothed by a heat roller of surface glossiness of 10% or greater than 70% as claimed in Claims 2 and 3, or having a surface roughness of 3 microns or less as claimed in Claim 6.

(4)

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 1 above, and further in view of Shirota et al.

Shirota et al. teach that a transparent laminate member for treating the image surface formed on paper by ink jet recording to impart gloss, etc. to the recorded image can be a single layer of thermoplastic resin or a multilayer (col. 12, lines 51-62, col. 13, lines 22-34).

It would have been obvious to one of ordinary skill in the art to have modified the method of the references as combined by providing the laminate resin film as a multilayer, as taught by Shirota et al., as an alternative to a single layer for providing a transparent laminate member for treating the image surface formed on paper by ink jet recording. The use of a laminate material film of two or more resin films or of a single resin film layer, as taught by Shirota et al., would have been obvious to one of ordinary skill in the art.

Art Unit: 1734

***Allowable Subject Matter***

(5)

Claims 7 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

(6)

Applicant's arguments, see Amendment, filed March 4, 2003, with respect to the rejection(s) of claim(s) 1-6, 9 and 10 under 35 USC 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found JP 59-091079.

***Conclusion***


(7)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvin Curtis Mayes whose telephone number is 703-308-1977. The examiner can normally be reached on Mon-Fri 7:00 AM - 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 703-308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Art Unit: 1734

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Melvin Curtis Mayes  
Primary Examiner  
Art Unit 1734

MCM  
July 14, 2003